

Should there be space exploration? (teacher's notes)

1. Warm-up (Activity 1) 5 mins

Aims: to break the ice and generate the interest in the topic.

Procedure: Ask students to read the quote and guess what it means and who said it.

(key: it's Neil Armstrong's quote. Personal meaning: In the literal sense, he took a small step onto the moon, and a small step for one man.. As he was standing on the moon, he looked back at Earth and realized how small in size he was to have accomplished this bold task. He did a great deed, a heroic deed, but he still felt very human and small in comparison to the vastness of space.

The deeper meaning: In the statement of "one giant leap for mankind", he was stating that this was a major accomplishment. The USA did what other countries were attempting to do, by walking on the moon. This giant leap was toward science, as a growth in knowledge, as well as for mankind, to show us that we are now not held by those limits anymore. The limits of space, and the mystery of the moon, had been broken!

2. Vocabulary work (Activity 2) 5 mins

Aims: to revise and learn learn topic-related vocabulary

Procedure: ask students to read the words in lines and cross the odd one out. While checking the answers (other options are ALSO possible, the idea is to activate students' schemata and brainstorm useful vocabulary), elicit the meaning of the rest of the words.

Key:

- 1) to escape (all of them except 'to escape' might be used about satellites)
- 2) life-enhancing (all other words have negative connotation and connected with possible problems on the Earth in future)
- 3) a spacecraft (it's a vehicle, not a living organism)
- 4) manned (it's an adjective)
- 5) collision (it might be done not only by people but also by a meteorite or asteroid)

3. Space exploration quiz (Activity 3) 5 mins

Aims: to expand the knowledge on the topic of space exploration.

Procedure: Ask the students to put key events in space exploration in the chronological order. Let the students compare their answers in pairs and check them open class.

Key:

Oct. 4, 1957: First artificial satellite, Sputnik I, is launched by Soviet Union.

April 12, 1961: Soviet cosmonaut Yuri Gagarin completes the first manned space flight, orbiting the Earth in 108 minutes.

June 16-19, 1963: Cosmonaut Valentina Tereshkova, the first woman in space, completes 48 orbits.

Dec. 21, 1968: First manned spacecraft to orbit moon, Apollo 8, comes within 70 miles (112 kilometers) of lunar surface.

July 20, 1969: Man walks on the moon. Neil Armstrong and Buzz Aldrin of Apollo XI spend 21 1/2 hours on the moon, 2 1/2 of those outside the capsule.

Dec. 21, 1988: Cosmonauts Vladimir Titov and Musa Manarov return to Earth from Soviet space station Mir after man's longest space flight, 365 days, 22 hours, 39 minutes.

Dec. 6, 1998: The first pieces of the International Space Station are launched and it has been a huge part of American and Russian space missions since.

Nov. 2, 2000: An American and Russian crew begins living aboard the international space station. There has been a crew of two or six aboard the space station at all times throughout the decade. It's the largest artificial body in orbit, and can be seen by the naked eye from Earth when viewed at the right time.

4. Reading for gist (Activity 4) 10 mins

Aims: to provide reading for gist

Procedure: Ask the students to read the quotes and discuss what they mean in pairs. Then students should divide them into two categories: for and against space exploration.

5. Follow - up discussion (Activity 5) 10 mins

Aims: to provide free speaking practice and apply new vocabulary in the discussion

Procedure: Ask students to discuss the questions in pairs. Change partners and let them report the most interesting information which they've found out about their previous partners.

6. Debates (Activity 6) 10 mins

Aims: to provide free speaking practice

Procedure: divide the students in two groups. One group should brainstorm and create a mind map of the benefits of space exploration, the second group should think of arguments against space exploration. Give them 5 minutes to discuss the ideas in groups, then organize debates.

7. Sum up 3-5 mins

Put errors on the board or whiteboard and let SS correct them.

Summarise the lesson and tell students what results they have achieved (Now you can ... After our reading and speaking lesson you will be able to....). Ask them if they have any questions.

8. Homework

Give students the links and ask to learn more about this topic –

<https://www.youtube.com/watch?v=KZBjrwqxfnk>

https://www.ted.com/playlists/16/way_way_out_there